U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: Gallicolumba stairi

COMMON NAME: Friendly ground-dove (American Samoa Distinct Population Segment)

LEAD REGION: Region 1

INFORMATION CURRENT AS OF: 10/11/2005

STATUS/ACTION

___ Species assessment - determined we do not have sufficient information on file to support a proposal to list the species and, therefore, it was not elevated to Candidate status
___ New candidate
_X_ Continuing candidate
___ Non-petitioned
__X_ Petitioned - Date petition received: 05/11/2004
__ 90-day positive - FR date:
_X_ 12-month warranted but precluded - FR date: 05/11/2005
_N_ Did the petition request a reclassification of a listed species?

FOR PETITIONED CANDIDATE SPECIES:
a. Is listing warranted (if yes, see summary of threats below)? Yes
b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? Yes
c. If the answer to a. and b. is "yes," provide an explanation of why the action is precluded.

We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for this species has been, for the preceding 12 months, and continues to be, precluded by higher priority listing actions (including candidate species with lower LPNs). During the past 12 months, most of our national listing budget has been consumed by work on various listing actions to comply with court orders and court-approved settlement agreements, meeting statutory deadlines for petition findings or listing determinations, emergency listing evaluations and determinations, and essential litigation-related, administrative, and program management tasks. We will continue to monitor the status of this species as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures. For information on listing actions taken over the past 12 months, see the discussion of "Progress on Revising the Lists," in the current CNOR which can be viewed on our Internet website (http://endangered.fws.gov/).

_X Listing priority change

Former LP: _3
New LP: _6

Date when the species first became a Candidate (as currently defined): 1994

___ Candidate removal: Former LPN: ___

___ A – Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

___U – Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

___ F – Range is no longer a U.S. territory.

___ I – Insufficient information exists on biological vulnerability and threats to support listing.

___ M – Taxon mistakenly included in past notice of review.

___ N – Taxon does not meet the Act's definition of "species."

___ X – Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Birds: Family Columbidae (Pigeons and Doves)

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: American Samoa (Ofu), Fiji, Tonga, Wallis and Futuna, Independent Samoa

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: American Samoa (Ofu, Olosega), Fiji, Tonga, Wallis and Futuna, Independent Samoa

LAND OWNERSHIP: All of the land on which the friendly ground-dove occurs in American Samoa is privately owned, but roughly one-third (on Ofu) is leased to the U.S. National Park Service as part of the National Park of American Samoa.

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LEAD FIELD OFFICE CONTACT: Pacific Islands Fish and Wildlife Office, Marilet A. Zablan, 808-792-9400, marilet_zablan@fws.gov

BIOLOGICAL INFORMATION

Species Description

The following description is from Watling (2001). The friendly ground-dove is an approximately 26-centimeter (10.2-inch) long, medium-sized brown ground-dove. Males have rufous-brown upperparts with a bronze-green iridescence, the crown and nape are grey and the wings rufous with a purplish lustre. The tail is dark brown. The abdomen and belly are dark brown olive, whilst the breast shield is a vinaceous pink with a white border. Females are dimorphic in Fiji and Tonga, but apparently not in Independent Samoa and American Samoa, where only the pale phase occurs. The pale phase is similar to males but rather duller. Immature

birds are similar to adults but are uniformly brown.

Taxonomy

The genus Gallicolumba is distributed throughout the Pacific and Southeast Asia. The genus is represented in the oceanic Pacific by six species. Three species are endemic to Micronesian islands or archipelagos, two are endemic to island groups in French Polynesia, and G. stairi is endemic to Samoa, Tonga, and Fiji (Sibley and Monroe 1990, 1993). Some authors recognize two subspecies of the friendly ground-dove, one, slightly smaller, in the Samoan archipelago (G. s. stairi), and the other in Tonga and Fiji (G. s. vitiensis; Mayr 1945). However, morphological differences between the two are slight (Watling 2001), and no genetic or other studies have validated the existence of separate subspecies. After review of the available taxonomic information (Mayr 1945; Sibley and Monroe 1990, 1993; Watling 2001), we conclude that G. stairi is a valid species.

Habitat/Life History

In American Samoa, the friendly ground-dove is typically found on forested slopes, particularly those with an open understory and fine scree or exposed soil; native forest may be preferred but the data on the species' distribution and habitat requirements in American Samoa are too few to allow generalization (J. Seamon, Department of Marine and Wildlife Resources (DMWR), pers. comm. 2005). Elsewhere the species is known to inhabit brushy vegetation and bamboo thickets on offshore islands and forest habitats on large, high islands (Watling 1982, Clunie 1999). The only life history information available for this species is that it typically builds a nest of twigs several feet from the ground, lays one or two white eggs, and is an omnivorous feeder (Watling 1982, Clunie 1999).

Historical and Current Range/Distribution

In American Samoa, the species was first reported on Ofu in 1976 (Amerson et al. 1982), and has been recorded on Olosega since the mid 1990s (J. Seamon, pers. comm. 2004). The American Samoan population of friendly ground-dove currently is distributed in American Samoa on the islands of Ofu and Olosega (Manua Group).

Population Estimates/Status

The friendly ground-dove is uncommon or rare throughout its range (Steadman and Freifeld 1998; Schuster et al. 2000; Freifeld et al. 2001; Watling 2001), except for on some small islands in Fiji (Watling 2001); however, this species is not known to be monitored except in American Samoa. Engbring and Ramsey (1989) described the population on Ofu as "very small," but did not attempt a population estimate. More than 10 ground-doves have been caught on Olosega between 2001 and 2004, suggesting that numbers here are greater than on Ofu, but birds may move between the two islands (J. Seamon, pers., comm. 2004), which once were a single landmass and are today connected by a causeway that is roughly 150 meters long. No current population estimate is available; the secretive habits of this species make monitoring difficult. The past five years of monitoring surveys do not, however, suggest any change in the relative abundance of the friendly ground-dove.

DISTINCT POPULATION SEGMENT (DPS)

The definition of "species" in section 3(15) of the Endangered Species Act (Act) includes any distinct population segment(s) of any species of vertebrate fish or wildlife that interbreed when mature. For a population to be listed under the Act as a distinct vertebrate population segment, three elements are considered: 1) the discreteness of the population segment in relation to the remainder of the species to which it belongs, 2) the significance of the population segment to the species to which it belongs, and 3) the populations segment's conservation status in relation to the Act's standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?) (61 FR 4722).

The species Gallicolumba stairi is found in Fiji, Tonga, Wallis and Futuna, Independent Samoa, and American Samoa. The status of the species as a whole is not monitored closely throughout its range, but based on available information, the friendly ground-dove persists in very small numbers in Independent Samoa (Schuster et al. 2000; Freifeld et al. 2001), and is considered to be among the most endangered of native Samoan bird species (Watling 2001). In Tonga, the species occurs primarily on small, uninhabited islands and in one small area of a larger island (Steadman and Freifeld 1998; Watling 2001). In Fiji, G. stairi is thought to be widely distributed but uncommon on large islands and relatively common on some small islands (Watling 2001).

The available information indicates that distinct populations of G. stairi, a cryptic, understory-dwelling dove not noted for long-distance dispersal, are definable. The distinct population segment of friendly ground-dove in American Samoa is discrete in relation to the remainder of the species as a whole. The genus Gallicolumba is widely distributed in the Pacific, but populations of individual species are today restricted to a subset of islands (often small, offshore islets) in any archipelago where they occur, or even to limited areas of single islands (e.g., Steadman and Freifeld 1998; Freifeld et al. 2001; Watling 2001). Therefore, populations of species such as G. stairi, which occurs in three archipelagos, have become isolated from each other. The population segment of this species in American Samoa (on Ofu and Olosega islands), is therefore distinct based on geographic and distributional isolation from the friendly ground-dove populations in Independent Samoa, Tonga, and Fiji. The distance between the U.S. population and the nearest population, in Samoa, is roughly 100 miles. The American Samoan island of Tutuila lies between these two populations; no Tutuila records of friendly ground-dove exist.

A population segment is considered "significant" if its loss would constitute a significant gap in the range of the taxon. The American Samoa population of the friendly ground-dove represents the easternmost distribution of this species. The loss of this population would truncate the species' range by approximately 100 miles, or approximately 15 percent of the linear extent of its range, which trends southwest-to-northeast from Fiji to American Samoa. Given the rarity with which this species appears in survey data from Independent Samoa, loss of the American Samoa population may decrease the likelihood of the friendly ground-dove's long-term persistence in the Samoan archipelago. Southwest of Samoa, the next location where this species is known to occur is the Vava`u Group in Tonga, roughly 350 miles away. Unlike other Pacific Island columbids, this species does not fly high above the canopy as, for example, island fruit doves and pigeons do; it is an understory species that forages largely on the ground and nests near the ground (Watling 2001). Therefore, the likelihood of recolonization over large

distances is low.

Based on the discreteness and significance of the American Samoa population of the friendly ground-dove, the U.S. Fish and Wildlife Service (Service) considers this population to be a distinct vertebrate population segment which warrants review for listing under the Act. The distinct population segment of the friendly ground-dove faces severe but non-imminent threats. See SUMMARY OF THREATS and Rationale for Listing Priority Number, below.

THREATS

A. The present or threatened destruction, modification, or curtailment of its habitat or range.
Clearing of lowland rainforests has been implicated as a limiting factor for these populations. At present, no land-clearing or development projects are underway in the known range of the friendly ground-dove in American Samoa.

B. Overutilization for commercial, recreational, scientific, or educational purposes.
Incidental shooting of this species by hunters may be an important threat. But despite its name, the friendly ground-dove is actually shy and secretive, so it is not likely that hunting is a primary threat.

C. Disease or predation.
Nest predation by rats (Rattus sp.) is an important threat to many island birds (Atkinson 1977, 1985), especially ground-nesting species (Moors and Atkinson 1984; Bertram and Nagorsen 1995; Flint 1999; Zino et al. 2001). For example, black rats (R. rattus) were responsible for the near extirpation of the burrow-nesting Galapagos petrel on Floreana Island (Cruz and Cruz 1987), and for the extinction of the ground-nesting Laysan rail, which had been translocated to Midway Atoll prior to the loss of the Laysan population (Fisher and Baldwin 1946). Rats thus may play a role in limiting populations of the friendly ground-dove, although no specific data from American Samoa exist with which to test this hypothesis. Feral cats have been observed in remote areas known to be frequented by ground-doves and may prey on friendly ground-doves and other ground-nesting species. Recent investigations suggest that avian malaria may be indigenous and non-pathogenic in American Samoa, and therefore is unlikely to limit bird populations there (Jarvi et al. 2003; J. Seamon, pers. comm. 2004). Although other blood parasites are common in many bird species in American Samoa, none have been reported to date in G. stairi samples (Atkinson et al. in review). No information is available about the effects of other avian diseases on this species.

D. The inadequacy of existing regulatory mechanisms.
Hunting bans are ongoing in American Samoa, and the American Samoa Government Department of Marine and Wildlife Resources has statutory authority to enforce these bans. Poaching is not currently considered a threat to the friendly ground-dove.

E. Other natural or manmade factors affecting its continued existence.
Small populations are particularly sensitive to thresholds in a range of environmental and demographic parameters (see for example Meffe and Carroll 1997: 214-223). This small

population may be at risk of extinction because of the low number of individuals and the high frequency of catastrophic events such as hurricanes. Although severe storms are a natural disturbance with which this species has coexisted for millennia, such storms may affect habitat and food resources for birds and thus increase the threats to a population already suffering predation by non-native mammals. For example, in 2004 Hurricane Heta virtually destroyed suitable habitat at one of the areas on Olosega where this species was most frequently encountered; numbers of ground-doves in other areas subsequently increased, suggesting they had moved from the area affected by the storm (J. Seamon, DMWR, pers. comm. 2005). Inbreeding and/or reduced likelihood of locating mates are also potential threats for small populations (e.g., Thevenon and Couvet 2002, Frankham 2003).

CONSERVATION MEASURES PLANNED OR IMPLEMENTED

Ongoing bans on hunting native species in American Samoa provide protection for this species, and its status is monitored through regular surveys (described below).

SUMMARY OF THREATS: The American Samoa Distinct Population Segment of the friendly ground-dove is suspected to be threatened by predation by nonnative mammals, and by hurricanes and other natural catastrophes which pose a particular threat to small populations with limited distribution such as this one. Based on our assessment of the available information about these threats, coupled with the persistent low numbers recorded for this species, the American Samoa DPS continues to meet our definition of a candidate species, i.e., we have on file sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened, but preparation and publication of such a proposal is precluded by higher priority listing actions. .

LISTING PRIORITY

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	**6***
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude: The magnitude of the threat facing the American Samoa Distinct Population Segment of the friendly ground-dove is high because of its low numbers, limited distribution, and serious threat suspected to be posed by introduced predators. Populations of other ground-nesting island birds have been limited or extirpated by such predators. The entire American Samoa population of this taxon is likely to be affected by these threats. Threats may be exacerbated by natural disturbances such as severe storms that increase birds' vulnerability to predation and poaching by temporarily destroying or redistributing food sources, which in turn causes birds to forage more widely and in more exposed areas than they typically do.

Imminence: Avian malaria, once thought to possibly pose a threat to the American Samoa Distinct Population Segment of friendly ground-dove, has been demonstrated not to be pathogenic in Samoa. At present, no development projects threaten the friendly ground-dove with habitat loss in American Samoa. Although threats from small population size and nonnative predators are ongoing, at this time we have no evidence that these threats are imminent.

Rationale for Change in Listing Priority Number:
New information about the natural history of Plasmodium species in Samoan birds indicates that avian malaria is unlikely to pose a threat to the friendly ground-dove. Continued monitoring of this species suggests that it is not in imminent danger of extinction in American Samoa from predation or threats associated with small population size, although these high magnitude threats continue to potentially threaten this populations. Therefore, we have changed the Listing Priority Number for the American Samoa Distinct Population Segment from 3 to 6.

Yes Have you promptly reviewed all of the information received regarding the species for the purpose of determining whether emergency listing is needed?

Is Emergency Listing Warranted? No. The species does not appear to be appropriate for emergency listing at this time because the immediacy of the threats is not so great as to imperil a significant proportion of the taxon within the timeframe of the routine listing process. We will continue to monitor the status of the friendly ground-dove in American Samoa as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures.

DESCRIPTION OF MONITORING
The Department of Marine and Wildlife Resources (DMWR), an agency of the American Samoa Government, is responsible for monitoring the friendly ground-dove and is the sole source of current, on-the-ground information about wildlife in the Territory. This agency is funded through the U.S. Fish and Wildlife Service's Federal Assistance program for wildlife restoration on an annual basis to monitor and manage the fish and wildlife resources of the Territory of American Samoa, and the Service requests annual updates from DMWR on the status of

candidate species. We also reviewed current scientific literature to seek new published information about the species in Samoa and elsewhere in its range, and we sent our most current information to regional and species experts for review. We received the latest update from DMWR in September, 2005; other queries and literature review yielded no new information. The friendly ground-dove is a secretive species and somewhat difficult to monitor. Several survey methods are therefore employed at a wide array of sites as part of regular surveys of birds in the Manua Islands. Surveys on Ofu and Olosega include annual visual surveys at six sites, biannual auditory surveys at four sites, and mist-net (mark-recapture) surveys at five sites at least annually. These surveys, which have been conducted for the past five years, have so far not yielded evidence of significant change in the relative abundance of the friendly ground-dove. The rate of detection of this secretive bird is insufficient to develop an estimate of total population size. However, the methods, frequency, and geographic coverage of monitoring surveys for this species are adequate to detect changes in distribution and trends in relative abundance over time.

COORDINATION WITH STATES

Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment: The Territory of American Samoa (Department of Marine and Wildlife Resources).

Indicate which State(s) did not provide any information or comments: N/A

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APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve: Acting _____ 11/16/05
Regional Director, Fish and Wildlife Service Date

_____

Concur: _____ August 23, 2006
Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Date of annual review: 10/02/2005
Conducted by: Dr. Holly B. Freifeld (Pacific Islands Fish and Wildlife Office review by: Marilet A. Zablan, Vertebrate Conservation Program Leader; Gina M. Shultz, Assistant Field Supervisor for Endangered Species; and Patrick Leonard, Field Supervisor)